This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

u81
B9c
189

o
d
m
a
a
k

n
h
t
c
b

S
V
r
S
c
l

rains, followed by an interval of fine weather. Then again, Ca
is entirely free from the blizzards and tornadoes so destructive
States.

The following table shows some features of the climate at
Springs throughout the year 1895:

1895. Month.	Maximum Temperature	Minimum Temperature.	No. of cloudy or rainy days.	No. of with ligh
January.....	60	41	16	c
February....	70	48	7	2
March.....	73	44	8	4
April.....	84	51	5	11
May.....	72	53	5	6
June.....	*104	50	†1	10
July.....	100	60	†2	13
August.....	101	60	†1	8
September..	94	58	2	9
October....	90	54	5	5
November..	80	37	10	6
December..	70	36	19	4

* Only two days above 98°. † No rain.

There was no day during the year in which the temperatur
not 55° at some hour.

The temperature of 90° or over (considered high in the sult
mosphere of the East) is comfortably borne in the dry air at Byro
pecially as the mode of dress there in vogue is such as best con
to the comfort of the wearer. It will be noticed that in only one n
(May) were there many high winds, and even then only on nine
of the month. One last point well deserves attention while dwelli
the climate at Byron. Many physicians and lay people labor unde
impression that the place is solely a summer resort, and that in w
the weather wholly unfits it for a sanitarium. Nothing could be fa
from the truth. There is no day in which the temperature doe
reach 55 to 60° F., the winds are not frequent and even the most
month last year had only nineteen cloudy and rainy days. The
rain-fall is only half that of San Francisco.

But even should the patients at the Springs be detained indoor
a few days, this could in no way interfere with their use of the wa
inasmuch as the baths are connected with the hotel by covered w
and the numerous attendants can always bring the water for drin
to those who need them.

Byron Hot Springs are situated among the foothills of the C
Range in Contra Costa County, about seventy miles northeast of
Francisco; they are among the wonders of California, and are m
visited by tourists. The springs are about fifty in number, and
situated in a small valley that gives every evidence of volcanic ori
Hot springs and cold springs are found within a few feet—in one

about tw
dioxide
sulphure
through
and a rec

All
them cal
water in
States ga
containin
contain s

By a
gout, etc
rheumati

It is
patholog
indicatio

Dest
the cause
end in vi
are the
rheumati
medicati
our reme
if at all a
in the e
rounding
must alt
tissues i
destroy
tained b
by neut
turbed t
tissue c
possible

In
tially o
tion.

Th
than b
when s
of baln

P
used in

names "hot salt", "liver and kidney" and "black sulphurous". Their analyses are as follows:

HOT SALT SPRING.

Mineral Ingredients.	U. S. gal. contains grains.	Mineral Ingredients.	U. S. gal. contains
Sodium Chloride	555.26	Calcium Carbonate	
Sodium Carbonate	6.21	Calcium Sulphate	
Potassium Chloride	36.02	Ferrous Carbonate	
Potassium Bromide	trace	Ammonium Chloride	
Potassium Iodide	0.03	Barium Carbonate	
Magnesium Chloride	2.26	Silica	
Magnesium Carbonate	12.11	Organic Matter	
Calcium Chloride	56.54	Total Solids	

Gasses: Free Carbonic Acid Gas.....3 cubic

HOT MUD SPRING.

Mineral Ingredients.	U. S. gal. contains grains	Mineral Ingredients.	U. S. gal. contains
Sodium Chloride	274.93	Calcium Sulphate	
Sodium Sulphate	42.16	Calcium Carbonate	
Potassium Chloride	26.46	Ferrous Sulphate	
Potassium Iodide	.32	Ammonium Chloride	
Potassium Bromide	trace	Silica	
Magnesium Chloride	2.26	Organic Matter	
Magnesium Sulphate	19.60	Total Solids	
Calcium Chloride	7.50		

Gasses: Free Carbonate Acid Gas.....17.75 cubic i
Free Sulphuretted Hydrogen.....14.50 cubic i

LIVER AND KIDNEY SPRING—Heavy Saline Water.

Mineral Ingredients.	U. S. gal's. contains grains	Mineral Ingredients.	U. S. gal's. contains
Sodium Chloride	622.07	Calcium Carbonate	
Potassium Chloride	33.74	Barium Carbonate	
Potassium Iodide	.79	Ferrous Carbonate	
Potassium Bromide	trace	Ammonium Chloride	
Magnesium Chloride	3.92	Silica	
Magnesium Carbonate	15.75	Organic Matter	
Calcium Chloride	85.37	Total Solids	
Calcium Sulphate	1.12		

Gasses: Free Carbonic Acid Gas.....7.82 cubic i

The "Hot Salt" water is used for drinking and bathing, the "
and Kidney" for drinking, and the "Hot Sulphurous Mud", of c
for bathing alone.

The inhibition of water is always indicated in disease, wh
rapid change in tissue is desired, together with increased eliminat
pathological products. The view that drinking of large quantiti
water dilutes the blood and tissue fluid is now no longer held.
Becker has shown that half an hour afterward these fluids ar
watery than after twenty-four hours abstinence from water. It ha
been shown that it is not the aqueous element alone that is incr
in the diureses resulting after large draughts of water, but tha
solids also, especially urea, the phosphates and sulphates are pr
in larger quantities.

T
consu
W
tinal t
poses
It
such v
minera
the By
seven h
Th
springs
increas
might
stomach
He
juice an
dosmos
is increa
being al
solvent
The
digestiv
neutraliz
and tiss
meals as
The
thorough
laxative
The
counter i
absorbed
water is
Hot
from the
ter-irritati
of the sta
flammatio
products
stimulate
The tens
and abso
ings thus
the actio

channel. The excretion of lactic acid which McLagan of the causes of pain and irritation, though not of the is especially increased.

Retrograde tissue metomorphosis is also increasec baths and by the irritation of the salts on the skin as creased consumption of oxygen and increased output of c and urea. This effect does not cease with the bath but c eral days afterward, when a series of baths have been tak

The sulphur in the "Hot Sulphurous Mud" being a stituent is absorbed and has considerable influence in the affections.

Wood states that sulphur baths act as a decided altera and as mud baths can be borne hotter than simple saline b sults are even more marked.

The benefit of the spring waters in rheumatism may thoroughly understood. Taken internally, the cleansin fermentative effects of the hot water is increased by the s of the sodium cloride on mucus. The combined laxati the water and sodium chloride empty the stomach an ptomaines and fecal accumulation, the sodium chloride, and carbon dioxide stimulate the flow of the digestive flui we add a proper diet, one set of organs at least and a ver set they are, will do their utmost to bring their owner to h

After absorbtion the water and contained salines aide saline and sulphur baths stimulate tissue metabolism, a action on skin, kidneys and lymph flow, cause a rapid el the resulting products. The rapidly changing fluids with th of the sodium chloride dissolve toxines, etc., and ir exudates.

Pain is relieved partly on account of the neutralizati acid by alkaline salts, and of its elimination by the skin, bu account of the relief of the nerve endings from pressure mysterious influence of counter irritation which we do understand.

To all these factors must be added, residence under a tem of hygiene and the presence of a management whose to make the place a sanatorium equal in its discipline Europe.

Methods of Treatment. If the patient has had a regul scribed for him by his physician this is rigidly adhered t the diet deemed most appropriate by the resident physician

A half pint of the "hot salt water" and a similar qu "liver and kidney" is drunk before breakfast. The for without griping, the latter is markedly diuretic.

relapse into the same condition as before. On his arrival a Springs, May 31, '96, his condition was as follows: Feet, knee and hands were swollen and tender; patient suffered great pai and back. A systolic murmur could be heard in the mit His bowels were constipated, the urine was scanty and there of appetite.

The patient started treatment on Monday morning by the water and bathing. His first bath was taken 11 A. M. able to go to lunch in the dining room at 1 P. M. when althc appetite was not good, his pains had entirely disappeared. tinued the treatment daily, m. X of tr. digitalis t. i. d. on of heart lesion. For the same reason the usual blanket s omitted.

By Tuesday his appetite had become ravenous, and has r so up to date, (June 9, '96). Pain and swelling of joints hav peared, the mitral murmur can no longer be heard, and the has gained 6½ pounds. During treatment bowels moved t four times daily, and the urine also increased greatly in quant

Case 2—Male, Age 43—Family history negative.

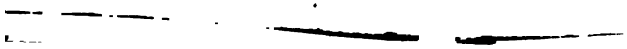
Patient had an attack of acute rheumatism, lasting six when he was nine years old. He had pneumonia in 1878. no other illness of consequence until 1890, when he had an a rheumatism also lasting six weeks. This involved lower lum gion feet and ankles. He says there was swelling at this time years later, the ankles and one of the knees became involved a swollen. He had a gonorrhea when attacked in 1890. Wher came sick in 1895, he came to the springs and was much impr his stay of two weeks. He remained fairly well until Februar when he grew very much worse and again came to the spring 20, 1896. Examination showed both ankles and knees pai swollen; there was some atrophy of left leg; the lower lumba was also involved.

The pains were very stubborn and probably of gonorrhea as the patient is subject to outbreaks of urethritis.

He was put on the usual treatment, taking daily mass mud baths. There is still a little soreness in the knees, b heels, but although the patient came on crutches he is now trips into the surrounding county on his bicycle.

Case 3, E. M., age 49, Watchmaker.—Family history neg

Patient has not had rheumatism before the present attack began about June 1st, 1896, with a painless swelling of the within two days the knees became swollen and painful and a the patient was under treatment, the diseased process now gr



BYRON HOT SPRINGS.

ANNOUNCEMENT.

To the Physicians of the Pacific Coast.

FOR the benefit of the members of the medical profes on this coast, and to more perfectly utilize the well kr therapeutic value of these Springs and Hot Mud Bath placing their use on a thoroughly scientific basis, the prietor has secured a competent resident physician, w services are at the command of physicians desiring to patients to this resort. Dr. Robert Crees, late Assistant t Chair of Dermatology and Assistant Demonstrator of Ana in the Medical Department of the University of Califo will in each case determine the choice and use of wha mineral water may be best adapted to the case. He wi guided in suitable cases, especially rheumatic and gout a complete examination, chemical and microscopical, o various secretions and excretions involved. The va other therapeutic means at his command (massage and h therapy) will be used when indicated.

When desired, the resident physician will, by corresp ence, keep the patient's physician fully informed as t progress, and be guided by any suggestions as to treat which may be offered.

This is the first time in the history of mineral sprin California that such an effort has been made, and it is fi believed that it will result in curing a still larger propo of those cases for the cure of which these springs are noted, especially those of a chronic character.

Address,

MANAGER BYRON HOT SPRINGS,
Contra Costa County, Calif